

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

Proposed

**AIR QUALITY PERMIT
Issued under 401 KAR 52:020**

Permittee Name: Tennessee Valley Authority
Mailing Address: 1101 Market Street, Chattanooga, TN 37402-2801

Source Name: TVA - Paradise Fossil Plant
Mailing Address: 13246 State Route 176, Suite 10
Drakesboro, KY 42337-2345

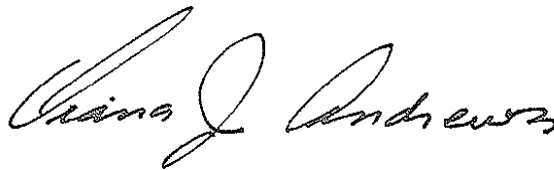
Source Location: Drakesboro, KY

Permit ID: V-07-018
Agency Interest: 3239
Activity ID: APE20070001
Review Type: Title V / Title IV / NOx Budget, Operating
Source ID: 21-177-00006

Regional Office: Owensboro Regional Office
3032 Alvey Park Dr. W., Suite 700
Owensboro, KY 42303
(270) 687-7304

County: Muhlenberg

Application
Complete Date: June 14, 2007
Issuance Date: August 14, 2007
Revision Date:
Expiration Date: August 14, 2012



**John S. Lyons, Director
Division for Air Quality**

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Permit Number	Permit Type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
O-87-012	Operating		12/5/1986	6/29/1987	Renewal Operating
S-99-064	Minor Construction and Operating	G133		8/31/1999	Add Coal Handling and Processing
V-04-024	Initial Issuance	50068	2/7/1997	12/29/2004	Withdrawn
VS-06-003	Initial Issuance	APE20050004	6/14/2006	7/12/2006	Add Construction of New Coal Fines Recovery System
V-07-018	Initial Issuance	APE2007001			Initial Title V

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission Unit 1 Boiler Unit 1
Emission Unit 2 Boiler Unit 2

Description:

Two Indirect Heat Exchangers, cyclone-furnace coal-fired boilers

Maximum continuous rating: 6959 MMBtu/hour, each

Primary fuel: Coal

Alternative fuels:

No. 2 fuel oil used for startup.

Coal fines maximum 14% by weight.

Wood waste maximum 5% of boiler's heat input (13% by weight).

Other nonhazardous waste materials such as used oil with less than 50 ppm PCB, boiler cleaning chemicals, solvents, oil-contaminated soil, rags, absorbent materials/rags and papers.

Controls: Selective Catalytic Reduction, Venturi Type Flue Gas Desulfurization Scrubber

Construction commenced: 1963

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers applicable to an emission unit with a capacity of more than 250 MMBtu per hour and commenced before August 17, 1971.

401 KAR 51:160, NO_x requirements for large utility and industrial boilers; incorporating by reference 40 CFR 96

401 KAR 52:060, Acid rain permits, incorporating by reference the Federal Acid Rain provisions as codified in 40 CFR Parts 72 to 78

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances

40 CFR 52.939(c)(49) and (54), Approval and Promulgation of Implementation Plans, Subpart S - Kentucky

1. Operating Limitations:

- a. Pursuant to 401 KAR 63:020, wood treated with arsenic (CCA) or other metals as preservatives shall not be combusted.
- b. Pursuant to 401 KAR 63:020, hazardous matter or toxic substances shall be handled to minimize the potentially harmful effects of emissions. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

2. Emission Limitations:

- a. Pursuant to 401 KAR 61:015, Section 4(1), particulate matter emissions shall not exceed 0.11 lb/MMBtu, each, based on a three-hour average.
- b. Pursuant to 40 CFR 52.939(c)(54) *Opacity Variance for TVA's Paradise Steam Plant*, for Unit 1, visible emissions shall not exceed 61% opacity and for Unit 2, 50% opacity based on a six-minute average, except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. Pursuant to 40 CFR 52.939(c)(49) *A revision to the Kentucky SIP for Tennessee Valley Authority Paradise Steam Plant*, sulfur dioxide emissions shall not exceed 1.2 lb/MMBtu, each, based on a twenty-four-hour average.

Compliance Demonstration Method:

To provide assurance that the particulate and the visible emission limitations are being met the permittee shall comply with the **3. Testing Requirements** and **4.f.** below. To provide assurance that sulfur dioxide emission limits are being met the permittee shall comply with the **4. Specific Monitoring Requirements** below.

3. Testing Requirements:

The permittee shall perform quarterly stack tests in order to demonstrate compliance with the particulate matter emission limitation. Testing shall be conducted in accordance with 401 KAR 50:045, Performance Tests, and under conditions that are representative of maximum emissions potential during the previous quarter.

4. Specific Monitoring Requirements:

- a. Pursuant to 401 KAR 61:005, Section 3 and Performance Specification 2 of Appendix B to 40 CFR 60 or 40 CFR 75, Appendix A, and 401 KAR 52:020, Section 26, continuous emission monitoring (CEM) systems shall be installed, calibrated, maintained, and operated for measuring sulfur dioxide emissions and either oxygen or carbon dioxide emissions. If any 24-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.
- b. Pursuant to 401 KAR 61:015, Section 6(1), the sulfur content of solid fuels, as burned shall be determined in accordance with methods specified by the Division.
- c. Pursuant to 401 KAR 61:015, Section 6(3) the rate of each fuel burned shall be measured daily and recorded. The heating value and ash content of fuels shall be ascertained at least once per week and recorded. The average electrical output, and the minimum and maximum hourly generation rate shall be measured and recorded daily.
- d. Pursuant to 401 KAR 61:005, Section 3(5), the Division may provide a temporary exemption from the monitoring and reporting requirements of 401 KAR 61:005, Section 3, for the continuous monitoring system during any period of monitoring system malfunction, provided that the source owner or operator shows, to the Division's satisfaction, that the malfunction was unavoidable and is being repaired as expeditiously as practicable.
- e. The duration of start ups shall be monitored.
- f. See Section G(a)18.
- g. The permittee shall monitor and record the following operating parameters at least once per shift:
 - (i.) Flow rate of recycle scrubbing liquor. Pump amperage for each recycle pump can be used as surrogate for flow rate.
 - (ii.) Pressure drop across each scrubber module.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

- a. Records shall be kept in accordance with 401 KAR 61:005, Section 3(16)(f) and 61:015, Section 6, with the exception that the records shall be maintained for a period of five years.
- b. Records of the following shall be maintained:
 - (i) data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of the applicable standard;
 - (ii) the results of all compliance tests;
 - (iii) fuel analyses;
 - (iv) the rate of fuel burned for each fuel on a daily basis;
 - (v) the heating value and ash content on a weekly basis; and,
 - (vi) the average electrical output and the minimum and maximum hourly generation rate on a daily basis.
- c. The duration of startups shall be recorded.

6. Specific Reporting Requirements:

- a. Pursuant to 401 KAR 61:005, Section 3 (16), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division.
 - (i) Owners or operators of facilities required to install continuous monitoring systems for sulfur dioxide or those utilizing fuel sampling and analysis for sulfur dioxide emissions shall submit for every calendar quarter, a written report of excess emissions and the nature and cause of the excess emissions if known. The averaging period used for data reporting should correspond to the emission standard averaging period which is a twenty-four (24) hour averaging period. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter.
 - (ii) For gaseous measurements, the summary shall consist of hourly averages in the units of the applicable standard. The hourly averages shall not appear in the written summary, but shall be provided in electronic files only.
 - (iii) The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. Proof of continuous monitoring system performance whenever system repairs or adjustments have been made is required.
 - (iv) When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report.
- b. For exceedances that occur as a result of startup, the permittee shall report:
 - (i) The type of start-up (cold, warm, or hot);

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (ii) Whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of why the start-up exceeded recommended or typical durations.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be continuously operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or good operating practices.
- b. Records regarding the maintenance of the control equipment shall be maintained.
- c. See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 3 Boiler Unit 3

Description:

Coal Fired Indirect Heat Exchanger, cyclone-furnace coal-fired boiler

Primary fuel: Coal

Alternative fuels:

No. 2 fuel oil used for startup.

Coal fines maximum 14% by weight.

Wood waste maximum 5% of boiler's heat input (13% by weight).

Other nonhazardous waste materials such as used oil with less than 50 ppm PCB, boiler cleaning chemicals, solvents, oil-contaminated soil, rags, absorbent materials/rags and papers.

Maximum continuous rating: 11457 MMBtu/hour

Controls: Electrostatic Precipitator, Selective Catalytic Reduction, Dual contact Flow Flue Gas

Desulfurization Scrubber

Construction commenced: 1970

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers applicable to an emission unit with a capacity of more than 250 MMBtu per hour and commenced before August 17, 1971.

401 KAR 51:160, NO_x requirements for large utility and industrial boilers; incorporating by reference 40 CFR 96

401 KAR 52:060, Acid rain permits, incorporating by reference the Federal Acid Rain provisions as codified in 40 CFR Parts 72 to 78

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances

40 CFR 52.939(c)(49), Approval and Promulgation of Implementation Plans, Subpart S - Kentucky

1. Operating Limitations:

- a. Pursuant to 401 KAR 63:020, wood treated with arsenic (CCA) or other metals as preservatives shall not be combusted.
- b. Pursuant to 401 KAR 63:020, hazardous matter or toxic substances shall be handled to minimize the potentially harmful effects of emissions. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.
- c. Bypass of the scrubber shall be limited to 720 operating hours in any 12-consecutive months.

2. Emission Limitations:

- a. Pursuant to 401 KAR 61:015, Section 4(1), particulate matter emissions shall not exceed 0.11 lb/MMBtu based on a three-hour average.
- b. Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity.
- c. Sulfur dioxide emissions shall not exceed 1.2 lb/MMBtu when the scrubber is operating and 3.1 lbs/MMBtu when the scrubber is bypassed based on a twenty-four hour average.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Compliance Demonstration Method:**

To provide assurance that the particulate and the visible emission limitations are being met the permittee shall comply with the **3. Testing Requirements** below. To provide assurance that sulfur dioxide emission limits are being met the permittee shall comply with the **4. Specific Monitoring Requirements** below.

3. Testing Requirements:

- a. Pursuant to AO-89-41D, the permittee shall conduct a performance test for particulate compliance annually.
- b. Testing shall be conducted in accordance with 401 KAR 50:045, Performance Tests, and under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit.
- c. In accordance with **4.b Specific Monitoring Requirements**, the permittee shall submit a schedule within six months from the date of issuance of this permit to conduct testing within one year following the issuance of this permit to establish the correlation between opacity and particulate emissions. In the alternative, if such testing has already been performed, the permittee shall submit the results of the testing within one month from the date of issuance of this permit for review and approval.
- d. If no Reference Method 9 tests are performed pursuant to **4.a(ii) Specific Monitoring Requirements**, then the permittee shall determine the opacity of emissions from the stack by Reference Method 9 at least once every fourteen (14) boiler operating days, or more frequently if requested by the Division, to demonstrate compliance with the opacity standard. If no Reference Method 9 evaluations are completed during the time period, the reason for not completing a test shall be documented and the permittee may use the COM system for assuring compliance with the visible emission limitation during that period.

4. Specific Monitoring Requirements:

- a. Pursuant to 401 KAR 61:005, Section 3, Performance Specification 1 of 40 CFR 60, Appendix B, and 401 KAR 52:020, Section 26, a continuous opacity monitoring (COM) system shall conform to requirements of these sections which include installing, calibrating, operating, and maintaining the continuous monitoring system for accurate opacity measurement. Excluding exempted time periods, if any three consecutive six-minute average opacity values exceed the opacity standard, the permittee shall, as appropriate:
 - (i) Accept the readout from the COM as an indicator of equipment performance and perform an inspection of the COM and/or control equipment and make any repairs or;
 - (ii) Within thirty (30) minutes after the third consecutive COM indicated exceedance of the opacity standards, if emissions are visible, initiate a determination of opacity using Reference Method 9. Also within thirty (30) minutes after the third consecutive COM indicated exceedance, inspect the COM and/or the control equipment, and initiate any repairs. If a Reference Method 9 cannot be performed, the reason for not performing the test shall be documented.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b. Pursuant to 401 KAR 52:020, Section 26, and 401 KAR 61:005, Section 3(6), to meet the monitoring requirement for particulate matter, the permittee shall use a COM. Opacity shall be used as an indicator of particulate matter emissions. Testing shall be conducted to establish the level of opacity that will be used as an indicator of particulate matter emissions. There may be short-term exceedances during the testing period required to establish the opacity indicator level. These exceedances will not be considered noncompliance periods since the testing is required to establish a permit requirement. The opacity indicator level shall be established at a level that provides reasonable assurance that particulate matter emissions are in compliance when opacity is equal to or less than the indicator level. Excluding exempted time periods:
 - (i) If any three (3) hour average of opacity values exceeds the opacity indicator level, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the COM system and make any necessary repairs.
 - (ii) If five (5) percent or greater of the COM data (three (3) hour average of opacity values) recorded in a calendar quarter show excursions above the opacity indicator level, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by Section G(a)(17) of this permit before conducting the test. The Division may waive this testing requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance Tests.
- c. The permittee shall monitor the electrostatic precipitator's transformer/rectifier (TR) set primary/secondary currents and voltages at least once per day.
- d. Pursuant to 401 KAR 61:005, Section 3 and Performance Specification 2 of Appendix B to 40 CFR 60 or 40 CFR 75, Appendix A, and 401 KAR 52:020, Section 26, continuous emission monitoring (CEM) systems shall be installed, calibrated, maintained, and operated for measuring sulfur dioxide emissions and either oxygen or carbon dioxide emissions. If any 24-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.
- e. Pursuant to 401 KAR 61:015, Section 6(1), the sulfur content of solid fuels, as burned shall be determined in accordance with methods specified by the Division.
- f. Pursuant to 401 KAR 61:015, Section 6(3) the rate of each fuel burned shall be measured daily and recorded. The heating value and ash content of fuels shall be ascertained at least once per week and recorded. The average electrical output, and the minimum and maximum hourly generation rate shall be measured and recorded daily.
- g. Pursuant to 401 KAR 61:005, Section 3(5), the Division may provide a temporary exemption from the monitoring and reporting requirements of 401 KAR 61:005, Section 3, for the continuous monitoring system during any period of monitoring system malfunction, provided that the source owner or operator shows, to the Division's satisfaction, that the malfunction was unavoidable and is being repaired as expeditiously as practicable.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- h. The duration of startups shall be monitored.
- i. The duration of any scrubber by-pass shall be monitored.

5. Specific Record Keeping Requirements:

- a. Records shall be kept in accordance with 401 KAR 61:005, Section 3(16)(f) and 61:015, Section 6, with the exception that the records shall be maintained for a period of five years.
- b. Records of the following shall be maintained:
 - (i) data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of the applicable standard;
 - (ii) the results of all compliance tests;
 - (iii) percentage of the COM data (excluding exempted time periods) showing excursions above the opacity standard and the opacity indicator level;
 - (iv) fuel analyses;
 - (v) the rate of fuel burned for each fuel on a daily basis;
 - (vi) the heating value and ash content on a weekly basis; and,
 - (vii) the average electrical output and the minimum and maximum hourly generation rate on a daily basis.
- c. Records of the electrostatic precipitator's primary/secondary voltage and current shall be maintained with long-term operational records for five years.
- d. The permittee shall keep visible observation records and Reference Method 9 observations in a designated logbook and/or an electronic format. Records shall be maintained for five years.
- e. The duration of start ups shall be recorded.
- f. The duration of any scrubber by-pass shall be recorded.

6. Specific Reporting Requirements:

- a. Pursuant to 401 KAR 61:005, Section 3 (16), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division.
 - (i) Owners or operators of facilities required to install continuous monitoring systems for sulfur dioxide or those utilizing fuel sampling and analysis for sulfur dioxide emissions shall submit for every calendar quarter, a written report of excess emissions and the nature and cause of the excess emissions if known. The averaging period used for data reporting should correspond to the emission standard averaging period averaging period which is a twenty-four (24) hour averaging period. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter.
 - (ii) Owners or operators of facilities required to install continuous monitoring systems for opacity shall submit for every calendar quarter a written report of excess emission and the nature and cause of emissions. The summary shall consist of the magnitude in actual percent opacity of six (6) minute averages of opacity greater than the opacity standard in the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous opacity measurements per minute. Any time period exempted shall be considered before determining the excess average of opacity. Opacity data shall be reported in electronic format acceptable to the Division.

- (iii) For gaseous measurements, the summary shall consist of hourly averages in the units of the applicable standard. The hourly averages shall not appear in the written summary, but shall be provided in electronic files only.
 - (iv) The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. Proof of continuous monitoring system performance whenever system repairs or adjustments have been made is required.
 - (v) When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report.
- b. The permittee shall report the number of excursions (excluding exempted time periods) above the opacity standard, date and time of excursions, opacity value of the excursions, and percentage of the COM data showing excursions above the opacity standard in each calendar quarter.
 - c. For exceedances that occur as a result of startup, the permittee shall report:
 - (i) The type of start-up (cold, warm, or hot);
 - (ii) Whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of why the start-up exceeded recommended or typical durations.
 - d. The permittee shall include in the semi-annual report required by Section F.5, the duration in hours of any scrubber by-pass based on a 12 month rolling total.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and/or good operating practices.
- b. Records regarding the maintenance of control equipment shall be maintained.
- c. See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 4 Unit 1 Building Heat Boiler
Emission Unit 5 Unit 2 Building Heat Boiler
Emission Unit 6 Unit 3 Building Heat Boiler

Description:

Indirect Heat Exchangers

Fuel: #2 fuel oil

Maximum continuous rating: 25.8 MMBtu/hour each

Construction commenced: Units 1 and 2, 1963; Unit 3, 1970

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers applicable to an emissions unit with a capacity of less than 250 MMBtu/hour, which commenced construction before April 9, 1972.

1. Operating Limitations:

None.

2. Emission Limitations:

- a. Pursuant to 401 KAR 61:015, Section 4(1), particulate matter emissions shall not exceed 0.11 lb/MMBtu based on a three-hour average.
- b. Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations
- c. Pursuant to 401 KAR 61:015, Section 5(1), sulfur dioxide emissions shall not exceed 2.1 lb/MMBtu based on a twenty four-hour average.

Compliance with PM and SO₂ limits is assured by burning fuel oil containing no more than 0.5% sulfur. If higher sulfur fuel oil is burned, the Division may require a stack test.

3. Testing Requirements:

Opacity shall be determined by Reference Method 9 at least once every 7-boiler operating days. If no Reference Method 9 evaluations are completed during this time period, the reason for not completing the evaluation shall be documented.

4. Specific Monitoring Requirements:

- a. Pursuant to 401 KAR 61:015, Section 6, the rate of fuel burned shall be monitored daily.
- b. Pursuant to 401 KAR 61:015, Section 6, the heating value and sulfur content shall be ascertained once per week. The permittee may use fuel supplier certification to meet this requirement.

5. Specific Recordkeeping Requirements:

See Section F.

6. Specific Reporting Requirements:

See Section F.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 7-12

8 Dravo Heaters (Unit 3 Powerhouse)

Description:

Indirect Heat Exchangers

Maximum continuous rating: 2.5 MMBtu/hour each

Construction commenced: 1970

Fuel: #2 fuel oil

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers applicable to an emissions unit with a capacity of less than 250 MMBtu/hour, which commenced construction before April 9, 1972.

1. Operating Limitations:

None.

2. Emission Limitations:

- a. Pursuant to 401 KAR 61:015, Section 4(1), particulate matter emissions shall not exceed 0.1 lb/MMBtu based on a three hour-average.
- b. Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations
- c. Pursuant to 401 KAR 61:015, Section 5(1), sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance with PM and SO₂ limits is assured by burning fuel oil containing no more than 0.5% sulfur. If higher sulfur fuel oil is burned, the Division may require a stack test.

3. Testing Requirements:

Opacity shall be determined by Reference Method 9 at least once every 7-boiler operating days. If no Reference Method 9 evaluations are completed during this time period, the reason for not completing the evaluation shall be documented.

4. Specific Monitoring Requirements:

- a. The rate of fuel burned shall be monitored daily.
- b. The heating value and sulfur content shall be ascertained once per week. The permittee may use fuel supplier certification to meet this requirement.

5. Specific Recordkeeping Requirements:

See Section F.

6. Specific Reporting Requirements:

See Section F.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 13-15 3 Dravo/Hastings Heaters (Coal Wash Plant)

Description:

Indirect Heat Exchangers

Maximum continuous rating: 2.5 MMBtu/hour each

Construction commenced: 1981

Fuel: #2 fuel oil

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers applicable to an emissions unit with a capacity of less than 250 MMBtu/hour, which commenced construction on or after April 9, 1972.

1. Operating Limitations:

None.

2. Emission Limitations:

- a. Pursuant to 401 KAR 59:015, Section 4(1), particulate matter emissions shall not exceed 0.1 lb/MMBtu based on a three hour-average.
- b. Pursuant to 401 KAR 59:015, Section 4(2), visible emissions shall not exceed 20% opacity except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations
- c. Pursuant to 401 KAR 59:015, Section 5(1), sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance with PM and SO₂ limits is assured by burning fuel oil containing no more than 0.5% sulfur. If higher sulfur fuel oil is burned, the Division may require a stack test.

3. Testing Requirements:

When operating, opacity shall be determined by Reference Method 9 at least every 7 boiler operating days. If no Reference Method 9 evaluations are completed during this time period, the reason for not completing the evaluation shall be documented.

4. Specific Monitoring Requirements:

- a. The rate of fuel burned shall be monitored daily.
- b. The heating value and sulfur content shall be ascertained once per week. The permittee may use fuel supplier certification to meet this requirement.

5. Specific Recordkeeping Requirements:

See Section F.

6. Specific Reporting Requirements:

See Section F.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 16-18, 19, 24, 36, 41, 52, 55-58, 71-73, 77

Fugitive Sources

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
16 & 17	Cooling Towers	53040 gallons/minute	Drift Eliminators	1968
18	Cooling Tower	53040 gallons/minute	Drift Eliminators	1969
19	Coal Hauling, Open Storage, Receiving Hopper	3000 tons/hour 17,000,000 tons/year	Wet suppression, enclosure, partial enclosure	1963
24	Coal Open Live Storage Piles #3 and #4	2000 tons/hour 17,000,000 tons/year	Enclosure, partial enclosure	1980
36	Coal Live Storage Silos #1 and #2	2000 tons/hour 17,000,000 tons/year	Enclosure	1963
41	Limestone Receiving	900 tons/hour 919,800 tons/year	Wet Suppression	1982
41A	Alternate Limestone Reclaim	80 tons/hour	None	1996
52	Limestone Stock-out and Storage	900 tons/hour 919,800 tons/year	Partial Enclosure	1982
55	Ash/Slag Reclaim from Slag Pond	134 tons/hour	None	1963
56	Ash/Slag Reclaim from Dewatering Area, Loader Traffic Reclaim from Dewatering Area, Open Storage	200 tons/hour	None	1963
57	Ash/Slag Onsite Hauling	200 tons/hour	Wet suppression	1963
58	Rim ditch formation	108 tons/hour	Wet suppression	1994
	Open drying of gypsum	167 tons/hour	Wet suppression	1994
	Excavation and transport of gypsum	167 tons/hour	Wet suppression	1983
	Soil cover transport	358 tons/hour	Wet suppression	1983
71	Transfer to New Conditioner Building Surge Bin and Crushers	2000 tons/hour	Enclosure, foam suppression	1999
72	Crushers (New Conditioner Building) and 3 Conditioners	1320 tons/hour	Enclosure, foam suppression, residual carryover	1999
73	Unit 3 Limestone Rail/Truck Unloading	900 tons/hour	Wet suppression	2003
77	Unit 3 Contribution to Limestone Storage Pile	900 tons/hour	Telescoping chute	2003

APPLICABLE REGULATIONS:

401 KAR 63:010, Fugitive emissions is applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality.

1. Operating Limitations

- a. Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:

- (i) Application and maintenance of asphalt, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (ii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling;
- (iii) Maintenance of paved roadways in a clean condition;
- (iv) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or other earth moving equipment or erosion by water;
- (v) Installation and use of compaction or other measures to suppress the dust emissions during handling.

b. Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

c. Pursuant to 401 KAR 63:010, Section 4, no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway.

2. Emission Limitations:

None.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of material received and processed.

5. Specific Record Keeping Requirements:

a. Records of material received and processed shall be maintained on a monthly basis and maintained as a rolling 12-month total.

b. Annual records estimating tonnage hauled for plant roadways shall be maintained for emission inventory purposes.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a. Control equipment shall be operated to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and/or standard operating practices.

b. Records regarding the maintenance and operation of control equipment shall be maintained.

c. See Section E.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 20, 21, 37, 38

Coal Breakers and Handling

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
20	Breaker Building (Breakers 1-2)	2000 tons/hour 17,000,000 tons/year	Enclosure, Foam Suppression	1963
21	Breaker Building (Breaker 3)	2000 tons/hour 17,000,000 tons/year	Enclosure, Foam Suppression	1970
37	Coal Handling Conditioner Building (Three Coal Breakers and Five Conditioners)	2000 tons/hour 17,000,000 tons/year	Enclosure, Foam Suppression	1963
38	Powerhouse Coal Handling Transfer Stations	2000 tons/hour 17,000,000 tons/year	Enclosure, Residual Carryover	1963

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing process operations applicable to emission units commenced before July 2, 1975.

1. Operating Limitations:

None.

2. Emission Limitations:

- a. Pursuant to 401 KAR 61:020, Section 2, particulate matter emissions shall not exceed the following:

Emission Unit	Description	PM Emission Limits
20	Breaker Building (Breakers 1-2)	92.7 lbs/hour; 263 tons/year
21	Breaker Building (Breaker 3)	92.7 lbs/hour; 263 tons/year
37	Coal Handling Conditioner Building	92.7 lbs/hour; 263 tons/year
38	Coal Handling Transfer Stations	86.9 lbs/hour; 369 tons/year

- b. Pursuant to 401 KAR 61:020, Section 2, visible emissions shall not exceed 40% opacity.
- c. Compliance will be assumed while processes are enclosed and foam suppression is utilized properly.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of material received and processed, and hours of operation.

5. Specific Record Keeping Requirements:

- a. Records of material received and processed and hours of operation shall be maintained on a monthly basis and maintained as a rolling 12-month total.
- b. Annual records estimating tonnage hauled for plant roadways shall be maintained for emission inventory purposes.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS,
AND OPERATING CONDITIONS (CONTINUED)**

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be operated to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and/or standard operating practices.
- b. Records regarding the maintenance and operation of control equipment shall be maintained.
- c. See Section E.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 22, 23, 25-31, 35, 39, 40 Coal Handling and Washing Plant

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
22	Transfer Station A	2000 tons/hour 13,000,000 tons/year	Enclosure, Residual Carryover of Foam Dust Suppression	1963
23	Transfer Station B	2000 tons/hour 6,500,000 tons/year		1970
25	Transfer Station G	2000 tons/hour 13,000,000 tons/year		1981
26	Transfer Station H	2000 tons/hour 13,000,000 tons/year	Enclosure, Foam Suppression	1981
27	Coal Storage Silo 5 & 6	2000 tons/hour, each 6,500,000 tons/year, each	Enclosure, Residual Carryover of Foam Dust Suppression	1981
28	Transfer Station J	2000 tons/hour 13,000,000 tons/year		1981
29	Transfer Station K	2000 tons/hour 13,000,000 tons/year	Enclosure	1981
30	Transfer Station L	1800 tons/hour 13,000,000 tons/year	Enclosure	1981
31	Transfer Station M	1800 tons/hour 13,000,000 tons/year	Enclosure	1981
35	Long Term Storage Pile, Coal Reclaim Hopper	2000 tons/hour 6,500,000 tons/year	Enclosure, Wet and Foam Suppression	1963
39	Magnetite Load in, Coarse Refuse Loadout	3000 tons/hour 17,000,000 tons/year	Enclosure	1981
40	Coarse Refuse Disposal	400 Tons/hour	Wet suppression, partial enclosure	1981

APPLICABLE REGULATIONS:

401 KAR 60:005, Incorporating by reference 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, applicable to units commenced after October 24, 1974.

401 KAR 61:020, Existing process operations applicable to emission units commenced before July 2, 1975.

1. Operating Limitations:

Coal processed through these Emission Units shall not exceed 13,000,000 tons per any 12 consecutive months.

2. Emission Limitations:

- Total emissions of particulate matter from the Coal Washing Plant (Emission Units 22, 23, 25-31, and 35) shall not equal or exceed 100 lb/hour, 1000 lbs/day, and 50 tons/year. Compliance with the emission limits in **2.c.** assures compliance with these limitations. [401 KAR 51:050, Section 3, Permit No. O-87-012]
- Pursuant to 40 CFR 60, Subpart Y, visible emissions shall not equal or exceed 20% opacity.
- Pursuant to 401 KAR 61:020, Section 2, particulate matter emissions shall not exceed the following:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Description	PM Emission Limit
22	Transfer Station A	0.45 lbs/hour; 1.48 tons/year
23	Transfer Station B	7.02 lbs/hour; 11.41 tons/year
25	Transfer Station G	0.31 lbs/hour; 1.02 tons/year
26	Transfer Station H	0.31 lbs/hour; 1.02 tons/year.
27	Coal Storage Silo 5	0.45 lbs/hour; 0.74 tons/year
27	Coal Storage Silo 6	0.22 lbs/hour; 0.36 tons/year
28	Transfer Station J	0.27 lbs/hour; 0.88 tons/year
29	Transfer Station K	0.27 lbs/hour; 0.88 tons/year
30	Transfer Station L	1.58 lbs/hour; 5.7 tons/year
31	Transfer Station M	0.24 lbs/hour; 0.88 tons/year
35	Storage Pile/Reclaim Hopper	0.27 lbs/hour; 0.44 tons/year

Compliance will be assumed while processes are enclosed and wet or foam suppression is utilized properly.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of material received and processed and hours of operation.

5. Specific Record Keeping Requirements:

- Records of material received and processed and hours of operation shall be maintained on a monthly basis and maintained as a rolling 12-month total.
- Annual records estimating tonnage hauled for plant roadways shall be maintained for emission inventory purposes.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- Control equipment shall be operated to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and/or standard operating practices.
- Records regarding the maintenance and operation of control equipment shall be maintained.
- See Section E.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Emission Units 32-34 Coal Conveying and Bunker Room**

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
32	Barge Unloader/Surge Hopper	2000 tons/hour 17,000,000 tons/year	Enclosure, water spray	1985
33	Transfer Station N (Breakers 4-7)	2000 tons/hour 17,000,000 tons/year	Enclosure, foam suppression, residual carryover, partial enclosure	1985
34	Transfer Station P and Storage Bypass	2000 tons/hour 17,000,000 tons/year	Enclosure, foam suppression, residual carryover	1985

APPLICABLE REGULATIONS:

401 KAR 60:005, Incorporating by reference 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, applicable to units commenced after October 24, 1974.

401 KAR 59:010, New process operations applicable to emission units commenced after July 2, 1975.

1. Operating Limitations:

None.

2. Emission Limitations:

- Pursuant to 401 KAR 59:010, Section 3(2), particulate matter emissions shall not exceed 58.4 lbs/hr, each, and 369 tons/year, each .
- Pursuant to 40 CFR 60.252(c) and 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity.

Compliance will be assumed while processes are enclosed and water or foam suppression is utilized properly.

3. Testing Requirements:

Opacity shall be determined using Reference Method 9 and the procedures in 40 CFR 60.11. The duration of the observations shall be a minimum of 1 hour (ten 6-minute averages) in length.

4. Specific Monitoring Requirements:

- The permittee shall perform visual observations of the emission points on a weekly basis. If visible emissions are seen, the permittee shall determine opacity in accordance with Reference Method 9.
- The amount of coal processed and hours of operation shall be monitored on a monthly basis and maintained as a rolling 12-month total.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

- a. The permittee shall keep a log of all weekly visual observations, any Reference Method 9 evaluations performed, and any corrective actions taken.
- b. Records of material received and processed and hours of operation shall be maintained on a monthly basis and maintained as a rolling 12-month total.
- c. See Section F.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be maintained to assure compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or good operating practices.
- b. Records regarding the maintenance of control equipment shall be maintained.
- c. See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 41- 52 Limestone Handling

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
41	Limestone Railcar/Truck Unloading System, Discharge from Railcar/Truck to Hopper	900 tons/hour 919,800 tons/year	Wet Suppression	1982
41A	Alternate Limestone Reclaim	80 tons/hour	None	1996
42	Limestone Reclaim/Receiving Hopper	900 tons/hour 919,800 tons/year	Bagfilter (DC-1)	1982
43-44	Limestone Conveying Transfer Point	900 tons/hour 919,800 tons/year	Bagfilters (DC-2A, 2B)	1982
45	Limestone Storage Silo Bin	900 tons/hour 919,800 tons/year	Bagfilter (DC-3)	1982
46-48	Limestone Storage Silo Vibrating Feeder	240 tons/hour 919,800 tons/year	Bagfilters (DC-4A, 4B, 4C)	1982
49-51	Limestone Prep Building Surge Hopper	300 tons/hour 919,800 tons/year	Bagfilters (DC-5A, 5B, 5C)	1982
52	Limestone Handling Bulk Storage Pile, Open Storage, Limestone Reclaim	900 tons/hour 919,800 tons/year	Partial Enclosure	1982

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations applicable to emission units commenced on or after July 2, 1975 (applies to Emission Units 42-51).

401 KAR 63:010, Fugitive emissions is applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality (applies to Emission Units 41, 41A and 52. See page 14 for requirements).

1. Operating Limitations

To preclude applicability of 401 KAR 51:017, particulate matter emissions from limestone handling, Emission Units 41-52, shall not exceed 25 tons in any 12 consecutive months. [Permit No. O-87-012]

2. Emission Limitations:

- a. Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity.
- b. Pursuant to 401 KAR 59:010, Section 3(2), particulate matter emissions shall not exceed the following:

Emission Unit	Description	PM Emission Limit
42	Limestone Reclaim/Receiving Hopper	51.4 lbs/hour
43-44	Limestone Conveying Transfer Point	51.4 lbs/hour
45	Limestone Storage Silo Bin	51.4 lbs/hour
46-48	Limestone Storage Silo Vibrating Feeder	41.6 lbs/hour
49-51	Limestone Prep Building Surge Hopper	43.1 lbs/hour

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance will be assumed when the control equipment is operated in accordance with manufacturer's specifications and/or standard operating practices.

3. Testing Requirements:

None.

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of material received and processed and hours of operation.

5. Specific Record Keeping Requirements:

- a. Records of material received and processed and hours of operation shall be maintained on a monthly basis and maintained as a rolling 12-month total.
- b. Annual records estimating tonnage hauled for plant roadways shall be maintained for emission inventory purposes.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be operated to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and/or standard operating practices.
- b. Records regarding the maintenance and operation of control equipment shall be maintained.
- c. See Section E.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS,
AND OPERATING CONDITIONS (CONTINUED)**

Emission Units 53-54 Two Lime Storage Silos

Description:

Storage of pebble quicklime to regulate pH of ash pond and metal-cleaning waste treatment facility.
Controls: bagfilters

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations applicable to emission units commenced on or after July 2, 1975.

Operating Limitations:

Decommissioned and shall not be operated.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 74 -76 Limestone Handling

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
74	Unit 3 Reclaim/Receiving Hopper (Limestone)	900 tons/hour	Wet suppression	2003
75	Unit 3 Limestone Storage Silo	900 tons/hour	Enclosure, Bagfilter	2003
76	Unit 3 Limestone Prep Building	600 tons/hour, each	Enclosure	2003

APPLICABLE REGULATIONS:

401 KAR 60:670, Incorporating by reference 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

1. Operating Limitations:

Emission Unit 74	Unit 3 Reclaim/Receiving Hopper	900 tons/hour
Emission Unit 75	Unit 3 Limestone Storage Silo	900 tons/hour
Emission Unit 76	Unit 3 Limestone Prep Building	600 tons/hour

2. Emission Limitations:

- a. Pursuant to CFR 672(a)(1), particulate matter stack or vent emissions shall not exceed 0.05 g/dscm (0.022 gr/dscf).
- b. Pursuant to 40 CFR 672(a)(2), visible stack or vent emissions shall not equal or exceed 7% opacity.
- c. Pursuant to 40 CFR 672(b), visible fugitive emissions from any transfer point on belt conveyors or from any other affected facility shall not equal or exceed 10% opacity.

3. Testing Requirements:

- a. Pursuant to 40 CFR 60.675(b)(1), the permittee shall use Reference Method 5 or 17 to determine initial compliance with the particulate matter concentration emission limit.
- b. Pursuant to 40 CFR 60.675(b)(2), opacity shall be determined by Reference Method 9.
- c. Pursuant to 40 CFR 60.675(c)(1), Reference Method 9 shall be used to determine the opacity of fugitive emissions, with the following additions:
 - (i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
 - (ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources. the required observer position relative to the sun (Reference Method 9, Section 2.1) must be followed.
 - (iii) When a water mist is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. Pursuant to 40 CFR 60.675(c)(2), in determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin using Reference Method 9, the duration of the Reference Method 9 observations shall be 1 hour (ten 6-minute averages).
- e. Pursuant to 40 CFR 60.675(c)(3), when determining compliance with the fugitive emissions standard, the duration of the Reference Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:
 - (i) There are no individual readings greater than 10 percent opacity; and
 - (ii) There are no more than 3 readings of 10 percent for the 1-hour period.
- f. Pursuant to 40 CFR 60.675(d), Reference Method 22 shall be used to determine fugitive emissions from a building enclosing any transfer point or conveyor belt. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

4. Specific Monitoring Requirements:

- a. The permittee shall perform qualitative visual observations of the opacity of emissions from each emission point on a weekly basis and maintain a log of the observations. If visible emissions are seen, then the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.
- b. The amount of limestone processed and hours of operation shall be monitored and recorded on an hourly basis, and annual throughput maintained as a rolling 12-month total.

5. Specific Recordkeeping Requirements:

- a. The permittee shall keep a log of all weekly visual observations, any Reference Method 9 tests performed, and any corrective actions taken.
- b. Records of material received and processed and hours of operation shall be maintained. on a monthly basis and annual throughput maintained as a rolling 12-month total.

6. Specific Reporting Requirements:

- a. The permittee shall submit the log required under subsection 5, Specific Recordkeeping Requirements semi-annually.
- b. See Section F.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be continuously operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or good operating practices.
- b. Records regarding the maintenance of control equipment shall be maintained.
- c. See Section E for further requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 79-84 Coal Fines Recovery Process

Emission Unit	Description	Maximum Operating Rate	Control Devices	Construction Commenced
79	Panscraper Loadout from Coal Fines Pond to Stockpile	400 tons/hour	Wet suppression	2006
80	Coal Fines Stockpile	4.2 acres/day	Wet suppression	2006
81	Front-end Loader from Stockpile to Reclaim Hopper	200 tons/hour	Wet suppression	2006
82	Reclaim Hopper and Transfer Point (to Conveyor 63)	200 tons/hour	Enclosure	2006
83	Screw Conveyor and Transfer Point (to Conveyor 64)	200 tons/hour	Enclosure	2006
84	Belt Conveyor and Transfer Point (to BC-45 at Station A)	200 tons/hour	Enclosure	2006

APPLICABLE REGULATIONS:

401 KAR 60:005, Incorporating by reference 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants.

1. Operating Limitations:

To preclude applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, Coal Fines processed through each affected facility described above shall not exceed 750,000 tons per any 12 consecutive months total.

2. Emission Limitations:

Pursuant to 401 KAR 60:005, Incorporating by reference 40 CFR 60, Subpart Y, visible emissions shall not equal or exceed 20% opacity.

3. Testing Requirements:

Opacity shall be determined using Reference Method 9 and the procedures in 40 CFR 60.11. The duration of the Reference Method 9 observations shall be a minimum of 1 hour (ten 6-minute averages) in length.

4. Specific Monitoring Requirements:

- The permittee shall perform visual observations of the emission points on a weekly basis. If visible emissions are seen, the permittee shall determine opacity in accordance with Reference Method 9.
- The amount of coal fines processed shall be monitored and recorded on a monthly basis and maintained as a rolling 12-month total.

5. Specific Recordkeeping Requirements:

- The permittee shall keep a log of all weekly visual observations, any Reference Method 9 tests performed, and any corrective actions taken.
- See Section F.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS,
AND OPERATING CONDITIONS (CONTINUED)**

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be maintained to assure compliance with permitted emission limitations, in accordance with manufacturer's specifications and/or good operating practices.
- b. Records regarding the maintenance of the control equipment shall be maintained.
- c. See Section E for further requirements.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and qualitative visible emission evaluation made. The results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause and any conservative actions taken for any abnormal visible emissions.

Description	Generally Applicable Regulation
Units 1 and 2 Powerhouse	
1. Units 1 and 2 coal bunker dust collectors (2 per unit)	401 KAR 63:010
2. Hydrogen dump vent	
3. Clean and dirty lubricating (lube) oil tanks - 6 @6,000 gallons each	
4. Turbogenerator lube oil system tanks (with vapor extractors) - 2 @10,250 gallons each	
5. Boiler Feedwater Pump Turbine (BFPT) lube oil tanks (with vapor extractors) - 4 @950 gallons each	
6. Several smaller lube oil tanks for miscellaneous equipment	
Unit 3 Powerhouse	
7. High pressure (HP) H ₂ seal oil unit vent	
8. Low pressure (LP) H ₂ seal oil unit vent	
9. HP turbine H ₂ and CO ₂ control station vent	
10. LP turbine H ₂ and CO ₂ control station vent	
11. Titration room fume hood and mercury room exhaust	
12. Emergency diesel generator sump pump	
13. Clean and dirty lube oil tanks - 2 @6,000 gallons each	
14. Turbogenerator lube oil system tanks (with vapor extractors) - 2 @ 8,450 gallons each	
15. BFPT lube oil tanks (with vapor extractors) - 2 @ 1,000 gallons each	401 KAR 63:010
16. Forced draft fan turbine lube oil tanks (with vapor extractors) - 3 @ 1,000 gallons each	401 KAR 63:010
17. Several smaller lube oil tanks for miscellaneous equipment	
18. Coal bunker dust collector - East Bunker Row	401 KAR 63:020, Sec. 3(a)
19. Coal bunker dust collector - West Bunker Row	401 KAR 63:020, Sec. 3(a)
Precipitator Area	
20. Hydrovexor Air Separator Vents	
21. Induced Draft (ID) fan lube oil tank vent	
Scrubber Area	
22. Scrubber chemistry lab hood exhaust	
23. Units 1 and 2 ID fan lube oil tank vent	
24. Scrubber chemistry lab hood exhaust (Unit 3)	
Coal Handling Process	
25. Railcar unloader - 1000 tph	401 KAR 63:010
26. Coal Breakers No. 1 and 2 refuse disposal activity - 100 tph	401 KAR 63:010
27. Coal Breaker No. 3 refuse disposal activity - 100 tph	401 KAR 63:010
28. Coal Breakers No. 4-7 refuse disposal activity - 200 tph	401 KAR 63:010
29. Transfer Station G mechanical dust collector - 11,250 cfm	401 KAR 59:010, Sec. 3(1)
30. Transfer Station H mechanical dust collector - 11,250 cfm	401 KAR 59:010, Sec. 3(1)
31. Silo #5 bin-vent mechanical dust collector - 6,000 cfm	401 KAR 59:010, Sec. 3(1)

INSIGNIFICANT ACTIVITIES (CONTINUED)

32.	Silo #6 bin-vent mechanical dust collector - 6,000 cfm	401 KAR 59:010, Sec. 3(1)
33.	Silos #5 and 6 transfer-in mechanical dust collector - 4,500 cfm	401 KAR 59:010, Sec. 3(1)
34.	Silos #5 and 6 transfer-out mechanical dust collector - 4,500 cfm	401 KAR 59:010, Sec. 3(1)
35.	Transfer Station J mechanical dust collector - 8000 cfm	401 KAR 59:010, Sec. 3(1)
36.	BC-46 reclaim mechanical dust collector - 4,500 cfm	401 KAR 59:010, Sec. 3(1)
37.	Transfer Station J mechanical dust collector - 10,200 cfm	401 KAR 59:010, Sec. 3(1)
38.	Transfer Station L mechanical dust collector - 10,400 cfm	401 KAR 59:010, Sec. 3(1)
39.	Transfer Station M mechanical dust collector - 4,500 cfm	401 KAR 59:010, Sec. 3(1)
40.	Barge unloader surge hopper mechanical dust collector - 5,250	401 KAR 59:010, Sec. 3(1)
41.	Transfer Station N mechanical dust collector - 10,500 cfm	401 KAR 59:010, Sec. 3(1)
42.	Transfer Station P mechanical dust collector - 8,000 cfm	401 KAR 59:010, Sec. 3(1)
43.	Coal conveyors - 1,000 to 4,000 tph	401 KAR 63:010
44.	Foam suppression chemical storage tanks - 7 @ 2,000-5,600 gallons each	

Coal Wash Plant

45. Process fuel oil storage tank - 1 @ 10,000 gallons
46. Fuel oil reagent tanks - 4 @ 100 gallons each
47. Frother agent (alcohol) storage tank - 1 @ 10,000 gallons
48. Alcohol reagent tanks - 4 @ 100 gallons each
49. Heating fuel oil tank - 1 @ 30,500 gallons
50. Diesel fuel oil tanks - 2 @ 400 gallons each
51. Used oil tank (mobile) - 1 @ 500 gallons
52. Lube oil tote tank

Miscellaneous Sources

53. Light-off fuel oil tanks - 3 @ 12,530 gallons each
54. Diesel fuel oil tank at Utility Building - 1 @ 10,600 gallons
55. Utility Building equipment oil tanks - 6 @ 60,500 gallons each
56. Utility Building antifreeze tank - 1 @ 270 gallons
57. Gasoline underground storage tank at Public Safety - 1 @ 10,000 gallons
58. Dirty insulating oil tanks at Switchyard - 2 @ 18,000 gallons each
59. Clean insulating oil tank at Switchyard - 1 @ 37,000 gallons
60. Dirty oil circuit breaker oil tank at Switchyard - 1 @ 5,500 gallons
61. Kerosene tank (west of Coal Conditioner Building) - 1 @ 500 gallons
62. Diesel fuel oil tank (west of Coal Conditioner Building) - 1 @ 1,500 gallons
63. Fire pump diesel oil tank at Intake Structure - 1 @ 450 gallons
64. Emergency diesel-fired water pumps at Intake Structure - 2 @ 300 hp each
65. Solvent degreasing stations (EPA 2000) - 19 stations
66. Domestic sewage treatment plant (0.040 x 10⁶ gallons/day rated capacity)
67. Diesel fuel oil tank at Nextel tower site (Met station) - 1 @ 147 gallons
68. Diesel fuel oil tank at fly ash pond for irrigation system - 1 @ 300 gallons
69. Oil purification units in various plant locations

40 CFR 60.116(a)(b)

401 KAR 61:020, Sec. 3(1)

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any 12 consecutive months.
2. Particulate matter, sulfur dioxide, and visible emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.
3. Coal processed through Emission Units 22, 23, 25-31, 35, 39, and 40 shall not exceed 13,000,000 tons per any 12 consecutive months.
4. Total emissions of particulate matter from the Coal Washing Plant (Emission Units 22, 23, 25-31, and 35) shall not equal or exceed 100 lb/hour, 1000 lbs/day, and 50 tons/year. [401 KAR 51:050, Section 3, Permit No. O-87-012]
5. To preclude applicability of 401 KAR 51:017, particulate matter emissions from limestone handling, Emission Units 41-52, shall not exceed 25 tons in any 12 consecutive months. [Permit No. O-87-012]
6. Emission Units 53 and 54 are decommissioned and shall not be operated.
7. Emission Units 75 and 76 are limited to 900 tons/hour and 600 tons/hour respectively.
8. To preclude applicability of 401 KAR 51:017, coal fines processed through Emission Units 79-84 shall not exceed 750,000 tons per any 12 consecutive months.
9. Pursuant to 401 KAR 63:020, the source shall not combust wood treated with arsenic (CCA) or other metals as preservatives.
10. Bypass of the Emission Unit 3 scrubber shall be limited to 720 operating hours in any 12-consecutive months.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrument monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within *30 days*. Other deviations from permit requirements shall *be included in the semiannual report required by Section F.6* [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

Division for Air Quality	U.S. EPA Region 4
Owensboro Regional Office	Air Enforcement Branch
3032 Alvey Park Drive W, STE 700	Atlanta Federal Center
Owensboro, KY 42303	61 Forsyth St.
	Atlanta, GA 30303-8960
Division for Air Quality	
Central Files	
803 Schenkel Lane	
Frankfort, KY 40601	

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the KYEIS emission survey is mailed to the permittee.
11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within 45 days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS**(a) General Compliance Requirements**

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].
2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - a. If additional applicable requirements become applicable to the source and the remaining permit term is 3 years or longer. In this case, the reopening shall be completed no later than 18 months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
 - d. If any additional applicable requirements of the Acid Rain Program become applicable to the source.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least 30 days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].
11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.
13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].
14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].
15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:

SECTION G - GENERAL PROVISIONS (CONTINUED)

- a. Applicable requirements that are included and specifically identified in the permit and
- b. Non-applicable requirements expressly identified in this permit.

17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of 60 days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least 30 days prior to the test.
18. Pursuant to Agreed Order AO-89-41D, the permittee shall submit within 90 days of issuance of the initial permit an alternative method of determining compliance with opacity requirements on Units #1 and #2.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of 5 years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least 6 months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within 10 days following the transfer.

Construction, Start-Up, and Initial Demonstration Requirements

Not applicable. No construction is authorized by this permit.

SECTION G - GENERAL PROVISIONS (CONTINUED)**(e) Acid Rain Program Requirements**

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
2. The source shall comply with all requirements and conditions of the Title IV, Acid Rain Permit (A-98-001) issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
 - e. This requirement does not relieve the source of other local, state or federal notification requirements.
2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 1515
Lanham-Seabrook, MD 20703-1515.

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None

SECTION J - ACID RAIN

ACID RAIN PERMIT CONTENTS

1. Statement of Basis
2. SO₂ allowances allocated under this permit and NO_x requirements for each affected unit.
3. Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.
4. The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Application and the Phase II NO_x Compliance Plan.
5. Summary of Actions

➤ Statement of Basis:

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100 and Titles IV and V of the Clean Air Act, the Kentucky Environmental and Public Protection Cabinet, Division for Air Quality issues this permit pursuant to Regulations 401 KAR 52:020, Permits, 401 KAR 52:060, Acid Rain Permit, and Federal Regulation 40 CFR Part 76.

PERMIT (Conditions)

Plant Name: Paradise Plant
Affected Unit: Unit 1

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2007	2008	2009	2010	2011
Tables 2, 3 or 4 of 40 CFR Part 73	10,818*	10,818*	10,818*	10,841*	10,841*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 1. The NO_x compliance plan is effective from January 1, 2007 through December 31, 2011. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.6(a)(2), of 0.86 lb/MMBtu for cyclone boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Paradise Plant
Affected Unit: Unit 2

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2007	2008	2009	2010	2011
Tables 2, 3 or 4 of 40 CFR Part 73	12,300*	12,300*	12,326*	12,326*	12,326*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 2. The NO_x compliance plan is effective from January 1, 2007 through December 31, 2011. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.6(a)(2), of 0.86 lb/MMBtu for cyclone boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

*The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

PERMIT (Conditions)

Plant Name: Paradise Plant
Affected Unit: Unit 3

➤ **SO₂ Allowance Allocations and NO_x Requirements for the affected unit:**

SO ₂ Allowances	Year				
	2007	2008	2009	2010	2011
Tables 2, 3 or 4 of 40 CFR Part 73	25,504*	25,504*	25,504*	25,558*	25,558*

NO _x Requirements	
NO_x Limits	<p>Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves a NO_x standard emissions limitation compliance plan for unit 3. The NO_x compliance plan is effective from January 1, 2007 through December 31, 2011. Under the NO_x compliance plan, annual average NO_x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.6(a)(2), of 0.86 lb/MMBtu for cyclone boilers.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>

*The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

➤ **Comments, Notes, and Justifications:**

1. Affected units are three (3) coal fired cyclone type boilers.
2. The Phase II permit contained a revised Repowering Extension Plan for Unit 3. However, TVA subsequently decided not to pursue the repowering option and never activated the Repowering Extension Plan. Therefore, the Repowering Extension Plan has been removed from the permit, and the Phase II application has been revised to reflect this change.

➤ **Permit Application:**

The Phase II Permit Application and the Phase II NO_x Compliance Plan are both part of this permit and the source must comply with the standard requirements and special provisions set forth in the Phase II Application and the Phase II NO_x Compliance Plan.

➤ **Summary of Actions:**

Previous Actions:

1. Draft Phase II Permit (# AR-96-18) including SO₂ compliance was issued for public comments on October 9, 1996.
2. Final Phase II Permit (# AR-96-18) including SO₂ compliance plan was issued on December 16, 1996.
3. Draft Phase II Permit (# A-98-001) was issued with the 1998 revised SO₂ allowance allocations and NO_x emission standards for public comment on November 19, 1998.
4. Final Phase II Permit (#A-98-001) was issued on February 26, 1999.
5. Draft Title V with Section J Acid Rain Permit was issued for public comment August 18, 2004.
6. Final Title V with Section J Acid Rain Permit was issued December 29, 2004

Present Action:

1. Redrafted.

SECTION K – NO_x BUDGET PERMIT

1) Statement of Basis

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100, the Kentucky Environmental and Public Protection Cabinet issues this permit pursuant to 401 KAR 52:020 Title V permits, 401 KAR 51:160, NO_x requirements for large utility and industrial boilers, and 40 CFR 97, Subpart C.

2) NO_x Budget Permit Application, Form DEP 7007EE

The NO_x Budget Permit application for these electrical generating units was submitted to the Division and received on October 30, 2002. Requirements contained in that application are hereby incorporated into and made part of this NO_x Budget Permit. Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

3) Comments, notes, justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.

Affected units are three (3) coal boilers. Each unit has a capacity to generate 25 megawatts or more of electricity, which is offered for sale. The units use coal and are used as base load electric generating units.

4) Summary of Actions

The NO_x Budget Permit is being issued as part of the initial Title V permit for this source. Public, affected state, and U.S. EPA review will follow procedures specified in 401 KAR 52:100.